

Improved tracing of contacts of heterosexual men with gonorrhoea

Relationship of altered female to male ratios

E. M. C. DUNLOP, AMY M. LAMB, AND DOROTHY M. KING

Whitechapel Clinic, The London Hospital

A study was reported in 1963 of the results of contact tracing by a physician persuading men suffering from gonorrhoea to find their sexual contacts and to give them 'contact slips' advising them to attend for examination. Contacts were divided into two groups, namely primary or 'reservoir' contacts (the presumed sources of infection) and subsequent or secondary contacts to whom the patient himself may have transmitted the disease. Only six of 100 women presumed to be sources of infection and eighteen of 22 subsequent contacts were brought to examination by this means (Dunlop, 1963). This was clearly an inefficient means for obtaining the attendance of such contacts and an improved method was subsequently put into practice.

Since December, 1964, contact-tracers at the Whitechapel Clinic of The London Hospital have further pursued the tracing of female contacts by interviewing all men suffering from gonococcal urethritis. The men were encouraged to give full details of their contacts and to persuade them to attend using 'contact slips'. In a small number of cases, in which persuasion had failed, the female contacts were visited by a contact-tracer. Since that time, as pointed out by King (1970), the total number of cases of gonorrhoea seen in the clinic each year has declined (Fig. 1; Table I), despite the increasing

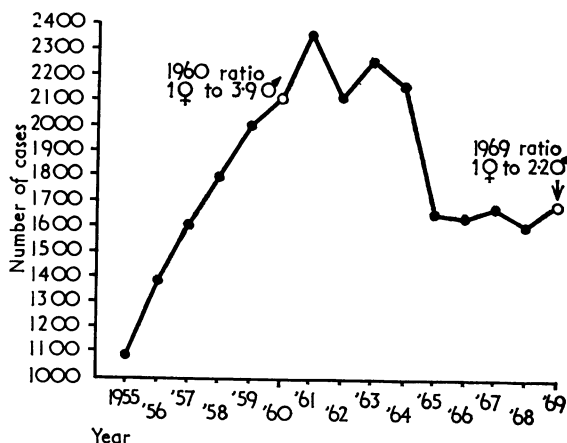


FIG. 1 Cases of gonorrhoea, Whitechapel Clinic, 1955-1969

1960 there were 1,677 and in 1969 there were 1,171, a decline of 30 per cent. However, the number of infected women brought for treatment had increased by 21 per cent. in the same period, from 433 in 1960 to 522 in 1969. Thus the ratio of infected women to men was 1 : 3.9 in 1960 and 1 : 2.2 in 1969.

TABLE I *Gonorrhoea, Whitechapel Clinic*

Year	1960	1969	Change (per cent.)
Women	433	522	+ 21
Men	1,677	1,171	- 30
Total	2,110	1,693	- 20
Ratio Women : Men	1 : 3.9	1 : 2.2	1.7

national incidence of the disease (Table II). In 1960 there were 2,110 cases and in 1969 there were 1,693 cases, a decline of 20 per cent. This decline was due to a decrease in the number of infected men: in

TABLE II *Gonorrhoea in England and Wales*

Year	1960	1968	Change (per cent.)
Women	7,152	12,367	+ 73
Men	26,618	32,595	+ 23
Total	33,770	44,962	+ 33
Ratio Women : Men	1 : 3.7	1 : 2.6	1.1

This decrease in total cases is compared with an increase of 33 per cent. in England and Wales between 1960 and 1968 (CMO's Report, 1969), the last year for which figures are available (Table II). The local decrease of 30 per cent. in infected men is compared with a national increase of 23 per cent.; the local increase of 21 per cent. in infected women is compared with a national increase of 73 per cent.

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Could this decline in the number of infected men at the Whitechapel Clinic be due to the fact that men suffering from urethritis were reluctant to attend there because of the activities of the contact-tracers? This is most unlikely because, as shown by Fig. 2, the number of men who attend because of urethral discharge that is then found to be due to nongonococcal urethritis (for which no equivalent intensive contact tracing is practised) has increased considerably at the Whitechapel Clinic since 1964.

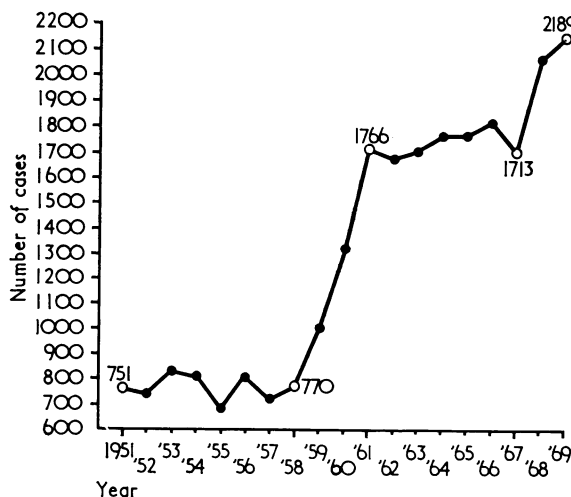


FIG. 2 Cases of nongonococcal urethritis, Whitechapel Clinic, 1951-1969

Results of contact tracing have improved markedly since 1964. Results obtained for the first 100 heterosexual men suffering from gonococcal urethritis who attended on or after January 1, 1960, were compared with those for a similar group of patients who attended on or after January 1, 1969 (Table III). In 1960 only six source ('reservoir') contacts attended compared with 36 in 1969. In 1960 six of eleven subsequent (secondary) contacts were examined compared with eighteen of 25 in 1969. Thus in 1960 a total of only twelve of 111 female contacts were examined compared with 54 of 125 in 1969. In a selected series, contact-tracers produced even better results (Hare, Lamb, and King, 1970).

TABLE III Gonorrhoea: contacts of 100 heterosexual men

Type of contact	1960		1969	
	No.	No. attended	No.	No. attended
Source ('Reservoir')	100	6	100	36
Subsequent	11	6	25	18
Total	111	12	125	54

In 1960, fifteen men were excluded from the series (Table IV); fourteen because they gave insufficient data about their sexual contacts and one because of a history of homosexual contact during the relevant period of time. In 1969, 26 men were excluded; ten because they gave insufficient data and sixteen (13 per cent.) because of admitted homosexual contact. It seems likely that patients will now more readily admit to homosexual contact than they would in the past. It is possible that a proportion of the infected men who gave insufficient data about their sexual contacts were homosexuals.

TABLE IV Source of gonorrhoea: reason for exclusion from series

Reason	1960		1969	
	No.	Per cent.	No.	Per cent.
Homosexual contact	1	1	16	13
Insufficient data	14	12	10	8
Total excluded	15	13	26	21

More effective contact tracing in gonorrhoea is not the only factor in the changing ratio of infected women to men. The relative increase in the number of women has also occurred in the total of new cases excluding gonorrhoea; in 1960 this ratio was 1:3.3, in 1969 it was 1:1.9 (Table V). Thus such cases in women increased by 165 per cent. from 1,052 in 1960 to 2,783 in 1969. In 1969, only 14 per cent. of heterosexual men suffering from gonococcal urethritis admitted to having acquired the infection from prostitutes whom they had paid, compared with 31 per cent. in 1960; 49 per cent. had acquired gonorrhoea from known 'girl-friends' in 1969, compared with 27 per cent. in 1960 (Table VI).

TABLE V New cases in Whitechapel Clinic: ratio of women to men

Diagnosis	1960	1969
Gonorrhoea	1:3.9	1:2.2
All other	1:3.3*	1:1.9**

* 1960: New cases in women = 1,052

** 1969: New cases in women = 2,783

TABLE VI Source of gonorrhoea for 100 heterosexual men (per cent.)

Source	1960	1969
Paid prostitute	31	14
Casual contact	39	34
'Girl-friend'	13	22
'Regular girl-friend'*	14	27
Wife	3	3

* Girl-friend with whom the patient has had repeated sexual intercourse over a period of one week or more.

The 1960 series is not exactly comparable with that of 1969. Nevertheless, it seems that changing social factors are important, and that an increasing amount of infection is now acquired from 'girl-friends'. Such girls are more accessible to contact-tracing than are prostitutes.

The present study has compared the results obtained by physicians using 'contact slips' in 1960 with results obtained by the additional use of contact-tracers in 1969. It is of interest that Morton (1970) has reported the results of a consistent policy of intensive contact tracing in Sheffield from 1961 to 1968. The number of men infected with gonorrhoea decreased by 2 per cent. in 1968 compared with 1961 but the number of infected women increased by 79 per cent. The ratio of infected women to men was 1 : 3.3 in 1961 and 1 : 1.7 in 1968. As the method of contact tracing used remained the same it seems that other factors must have been concerned in this change of ratio.

It may well be that women will form a generally increasing proportion of the patients attending clinics. Thus the national ratio for gonorrhoea in women compared with men has steadily approached unity: in 1960 it was 1 : 3.7 compared with 1 : 2.6 in 1968 (Table II). Even in the absence of an increase in total cases of gonorrhoea, of other infections or of persons attending for advice, the increasing proportion of women will place a growing burden on clinic staff. This is because the examination of women is more time-consuming than that of men, requires more experienced staff, and makes greater demands on the associated laboratory services. The staffing of clinics and their associated laboratories should be reviewed with this in mind; it should be sufficient to prevent them becoming overburdened and to allow an adequate margin for research and for teaching.

Summary

Since 1964 contact-tracers have been used at the Whitechapel Clinic to interview all men suffering from gonorrhoea. In 1960 only twelve of the female sexual contacts of 100 men suffering from gonorrhoea attended for examination but in 1969, in a similar series, 54 women attended.

In 1960, a total of 2,110 cases of gonorrhoea was diagnosed compared with 1,693 in 1969, a decline of 20 per cent. Cases in men had decreased by 30 per cent. from 1,677 to 1,171, but cases in women had increased by 21 per cent. from 433 to 522. The ratio of infected women to men was 1 : 3.9 in 1960 and 1 : 2.2 in 1969. In contrast, reported cases of gonorrhoea in England and Wales increased by 33

per cent. between 1960 and 1968, for women by 73 per cent., and for men by 23 per cent.

More effective contact tracing is not the only factor in the changing ratio of infected women to men. The relative increase in the number of women is also observed in the total of new cases excluding gonorrhoea. In 1969, only 14 per cent. of heterosexual men suffering from gonorrhoea admitted to having acquired the infection from prostitutes whom they paid compared with 31 per cent. in 1960; but 49 per cent. had acquired gonorrhoea from known 'girl-friends' in 1969 compared with 27 per cent. in 1960. An increasing number of infections is now acquired from 'girl-friends' and such girls are more accessible to contact tracing than are prostitutes. It is likely that women will continue to provide a growing proportion of the patients attending clinics; even in the absence of a general increase in the numbers of persons attending the clinics, this increasing proportion of women will place a growing burden on the staffs of clinics and laboratories. Staffing should be reviewed with this in mind.

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References

- CMO'S REPORT (1969) 'The Annual Report of the Chief Medical Officer of the Department of Health and Social Security for the Year ended December 31, 1968', p. 49, and Appendix C, p. 257. HMSO, London (*Brit. J. vener. Dis.* (1970) **46**, 76)
- DUNLOP, E. M. C. (1963) *Brit. J. vener. Dis.*, **39**, 109
- HARE, M. J., LAMB, A. M., and KING, D. M. (1970) *Ibid.*, **46**, 485
- KING, A. J. (1970) *Brit. med. J.*, **1**, 451
- MORTON, R. S. (1970) *Brit. J. vener. Dis.*, **46**, 103

Amélioration de la recherche des contacts d'hommes atteints de gonococcie. Relation avec le changements des rapports femme/homme

SOMMAIRE

A Whitechapel Clinic, depuis 1964, des spécialistes de la recherche des contacts ont été utilisés pour s'entretenir avec tous les hommes atteints de gonococcie. En 1960, pour 100 hommes gonococciques, seulement 12 des partenaires féminines avaient pu être examinées; mais en 1969, dans une série semblable, 54 femmes se présentèrent. En 1960, un total de 2.110 cas de gonococcie furent reconnus contre 1.693 en 1969, soit une diminution de 20 pour cent. Chez les hommes, la diminution a été de 30 pour cent, de 1.677 à 1.171, mais chez les femmes il y eut une augmentation de 21 pour cent, de 433 à 522. Le rapport femmes infectées/hommes a été de 1:3,9 en 1960 et de 1:2,2 en 1969. Par contre, le nombre des cas de

gonococcies rapportés en Angleterre et au Pays de Galles a augmenté de 33 pour cent de 1960 à 1968: 73 pour cent pour les femmes, 23 pour cent pour les hommes.

Une recherche plus efficace des contacts n'est pas le seul facteur intervenant dans le changement du rapport femmes infectées/hommes. On observe également une relative augmentation du nombre des consultantes dans le total des cas nouveaux, gonococcie exclue. En 1969, 14 pour cent seulement des hommes hétérosexuels atteints de gonococcie admettaient avoir contracté leur infection de prostituées qu'il avaient payées alors que le chiffre était de 31 pour cent en 1960; mais 49 pour cent avaient contracté

la gonococcie d'amies connues en 1969, contre 27 pour cent en 1960. Il existe actuellement un plus grand nombre d'infections provenant d'amies, et de telles filles sont plus faciles à retrouver que des prostituées. Il est vraisemblable que les femmes continueront à représenter une proportion croissante parmi les malades consultant les cliniques; même en l'absence d'une augmentation générale dans le nombre des consultants, cette augmentation de la proportion de femmes va se traduire par un excès de travail pour le personnel des cliniques et des laboratoires. La question du personnel doit être révisée avec ceci à l'esprit.